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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/678,800	10/04/2000	Takeyuki Itabashi	503.39144X00	6482
20457	7590	02/23/2004	EXAMINER	
ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-9889			DINH, TUAN T	
			ART UNIT	PAPER NUMBER
			2827	

DATE MAILED: 02/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

### Application No.

09/678,800

### Applicant(s)

ITABASHI ET AL.

### Examiner

Tuan T Dinh

### Art Unit

2827

*AW*

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 1-4, 8, 10 and 11 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-7 is/are allowed.
- 6) ☒ Claim(s) 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10</u> . | 6) <input type="checkbox"/> Other: ____  |

**DETAILED ACTION*****Election/Restrictions***

1. Applicant's election with traverse of Group I (claims (5-7)/9 in Paper No. 9 is acknowledged. The traversal is on the ground(s) that Group II and I are drawn to an electroless copper plating machine and not a combination and subcombination. This is not found persuasive because Group I, for example, as claim 5 shows a reaction bath which adds at least one of alkaline earth metal+...to react with precipitate sulfuric ions and oxalic ion as alkaline metal salt precipitate... and a filter unit for separating said metal salt precipitate as a combination, the combination having the filter unit, which has a function to separate the metal salt precipitate. However, Group II, as claim 8 shows a reaction bath, which adds a metal (only) or compound containing a metal to the plating solution to metal salt precipitate, which suppress generating of the plating metal as metal salts, and a ultra filtration unit for removing salt metal precipitate as a subcombination, the subcombination having a specific function to remove the metal salt precipitate from a plating solution. The "filter unit" has function to "separate the metal salt precipitate" in the plating solution, which is different of the "ultra filtration" having function to "remove the metal salt precipitate" from the plating solution. Examiner believes the restriction requirement in paper #8 is proper.

Claim 9 is improper depend on claims 5-7 because the limitation of claim 9, for example, "said ultra filtration, line 2" does not disclose in claims 5-7; therefore, examiner suggests canceling or amending claim 9.

The requirement is still deemed proper and is therefore made FINAL. Claim 8 is withdrawn from further consideration as being drawn to non-elected subject matter.

### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "21" has been used to designate both supply tank and a pH conditioner supply tank. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. The disclosure is objected to because of the following informalities:

Page 14, line 21, change "a pH conditioner supply tank 21" to –a pH conditioner supply tanks 22" for showing as same as elements in drawings.

Appropriate correction is required.

***Claim Objections***

4. Claim 9 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim since claim 9, which is depend on claims 5-7 and 8.

However, claim 9 shows a limitation of "said ultra filtration unit" would not teach in claims 5-7, but rather read on claim 8 (claim 8 is withdrawn from further consideration as non-elected claim). See MPEP § 608.01(n). Accordingly, the claim 9 not been further treated on the merits.

Examiner suggests amending or canceling claim 9.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 9 recites the limitation "said ultra filtration unit" in line 2. There is improper antecedent basis for this limitation in the claim.

***Allowable Subject Matter***

7. Claims 5-7 are allowed.

The following is an examiner's statement of reasons for allowance: the references cited disclose a machine or an apparatus having an electroless copper

Art Unit: 2827

plating solution, an electroless copper plating bath, a filter unit, and some other claim elements. However, they do not disclose or render obvious in combination of an electroless copper plating machine having a reaction bath adding with alkaline earth metal to react with alkaline earth metal salt precipitate in the plating solution, and a filter unit for separating said metal salt precipitate.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Saubestry et al., Agens, Honma et al., Akahoshi et al., Nakaso et al., Krulik, Bissinger, Krulik et al., and Vaughan disclose related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T Dinh whose telephone number is 703-306-5856, and 571-272-1929 after 02/05/04. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kammie Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2827

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan Dinh  
January 23, 2004

A handwritten signature in black ink, appearing to read 'Tuan Dinh', with a long, sweeping horizontal line extending to the right.